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REMARKS

Claims 7-10 have been amended to address the objection under 37 CFR 1.375(c). Independent claims 1 and 6 also have been amended to clarify that the sulfur comprises a colloidal suspension of sulfur. This clearly distinguishes the claims from the German reference (DE-3514724) which teaches a composition comprising a precipitated sulfur. A precipitated sulfur is not a colloid suspension. See, for example, the attached pages from "Colloidal Chemistry" by Weiser et al. Accordingly, neither claim 1 nor claim 6 nor any of the claims dependent thereon can be said to be anticipated by the German reference.

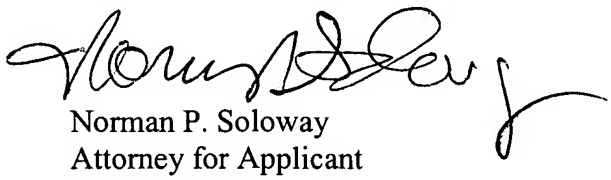
New claims 11-18 have been added to further scope the invention.

The indicated allowability of claims 2 and 3 is noted, with thanks. However, in view of the foregoing amendments and comments, it is believed that all of the claims are allowable over the art.

Having dealt with all the objections raised by the Examiner, the Application is believed to be in order for allowance. Early and favorable action are respectfully requested.

In the event there are any fee deficiencies or additional fees are payable, please charge them (or credit any overpayment) to our Deposit Account Number 08-1391.

Respectfully submitted,



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COLLOID CHEMISTRY

(A Textbook)

BY

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JOHN WILEY & SONS, Inc.

London: CHAPMAN & HALL, Limited

1939

isually made up of more than one substance. But, for convenience, we frequently refer to a finely divided phase as a colloid. This is particularly true if we are dealing with colloidal organic materials such as gelatin, agar, and rubber which are either non-crystalline or submicroscopically crystalline.

COLLOIDAL SYSTEMS

The Colloidal Zone

A colloidal system is a heterogeneous or dispersed system of at least wo phases, one of which, a finely divided or *dispersed phase*, is more or less uniformly distributed in a continuous phase, the *dispersion medium*. Wolfgang Ostwald[3] first classified dispersed systems on the basis of the size of the particles of the dispersed phase and set the limits of the colloidal zone. His most recent classification is given n Table I.[4] The colloidal zone which Ostwald once referred to as "the land of neglected dimensions" is thus set between two arbitrarily

TABLE I

Classification of Dispersed Systems (Ostwald)

Type	Range of particle size	Characteristics
Coarse dispersions	$> 0.5\ \mu$ ($> 5 \times 10^{-5}$ cm)	Particles do not run through a paper filter, do not diffuse, and do not pass through a dialyzing membrane; are microscopically visible.
Colloidal dispersions	$0.5\ \mu$ to $1\ m\mu$ ($5 \times 10^{-5} - 1 \times 10^{-7}$ cm)	Particles run through a paper filter but not an ultrafilter; are not resolved in an ordinary microscope but are usually recognizable in an ultramicroscope; diffuse and pass through a dialyzing membrane very slowly, if at all.
Molecular dispersions, solutions	$< 1\ m\mu$ (1×10^{-7} cm)	Particles pass through both a paper filter and an ultrafilter; are not visible in microscope or ultramicroscope; diffuse and pass through dialyzing membranes quite rapidly.

[3] *Kolloid-Z.*, 1, 291, 331 (1907).

[4] Ostwald: Kuhn's "Kolloid chemisches Taschenbuch," Leipzig, 11 (1935); *f.* von Buzágh: "Kolloidik," Dresden (1936).

chosen limits of particle size: $0.5\ \mu$ which is near the lower limit of the resolving power of an ordinary microscope, and $1.0\ m\mu$ which is somewhat greater than the diameters of ordinary molecules and ions. The arbitrary nature of the limits is evidenced by the fact that certain substances such as egg albumin and hemoglobin may be molecularly dispersed in water but the molecules of the compounds are so large that they come well within the colloidal range. For the most part, however, particles in the colloidal state consist of aggregates of molecules that are too small to be resolved in the ordinary microscope.

Classification and Terminology

Classifying colloidal systems on the basis of the states of aggregation (solid, liquid, and gas), Ostwald recognized eight types of systems. These are given in Table II, together with the name of each system and some typical examples of each.

TABLE II

Types of Colloidal Systems

Dispersed phase (internal phase)	Dispersion medium (external phase)	Name	Typical examples
Solid	Liquid	Sol	Gold in water; nickel in benzene; arsenic trisulfide in water
Liquid	Liquid	Emulsion	Kerosene in water; water in benzene; milk; mayonnaise
Gas	Liquid	Foam	Froth on beer; foam on soap solutions; meringues
Solid	Solid	Solid sol	Gold ruby glass; certain gems; blue rock salt; black diamond
Liquid	Solid	Solid emulsion	Certain minerals with liquid inclusions; milk quartz; opal; pearl
Gas	Solid	Solid foam	Minerals with gaseous inclusions; pumice; lavas
Solid	Gas	Solid aerosol	Smoke; volcanic dust; ammonium chloride fumes
Liquid	Gas	Liquid aerosol	Fog; cloud; mist

The third column of Table II gives several terms commonly used in colloid chemistry. *Sol* is a general term usually applied to dispersions of solid in liquid, solid, or gaseous media. Since dispersions of solid in liquid are the most common examples of this class, they are